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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/991,111 | 11/16/2001 | Arnab Das | 15-19-15-2 | 3440 |

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Docket Administrator (Room 3J-219)
Lucent Technologies Inc.
101 Crawfords Corner Road
Holmdel, NJ 07733-3030

EXAMINER

TALAPATRA, ANIKA F

| | |
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| ART UNIT | PAPER NUMBER |
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2631

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/991,111

Applicant(s)

DAS ET AL.

Examiner

Anika F. Talapatra

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/16/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 16 November 2001 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the following documents have no English translation and have not been considered:

- i. EP 1067730; and
- ii. De 19842039.

The information disclosure statement (IDS) is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United

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States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 to 10, and 12 to 14, rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (U.S. Patent 6438119) (hereafter referred to as Kim).

As to claim 1, Kim teaches a method for processing control information in a wireless communication system via a control channel for signaling information (column 1, lines 47-52; column 5, lines 9-18; column 6, lines 21-35; column 10, lines 4-57), and another channel for data (column 4 lines 30-34; column 10, lines 4-57; figure 4). Kim teaches transmission format information is separately decoded from the portion of the encoded signaling information (column 6, line 46- column 7, line 19; figures 1-2).

As to claim 2, Kim teaches a shared control channel (column 1, lines 22-26, column 6, lines 21-35) shared among a plurality of mobile stations for communicating with a base station (column 5, lines 9-18).

As to claim 3, Kim teaches a dedicated control channel (column 1, lines 47-52; column 5, lines 9-18) used by a plurality of mobile stations for communicating with a base station (column 5, lines 9-18). The control channel is used to send signaling information (column 1 line 47- column 2, line 24; column 13, lines 51-64).

As to claim 4, Kim teaches a method for processing control information, wherein the control information, or signaling information, includes: transport format and resource-related information about the frame length of the data transmitted (column 2, lines 14-25; column 7, lines 21-49); and cyclic redundancy check information (column 2, lines 26-34; column 7, lines 21-33).

As to claim 5, Kim teaches a method for processing control information, wherein the control information includes transport format and resource-related information, which includes transmission format information. Kim teaches the transmission format information in the form of frame length of the data

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transmitted (column 2, lines 14-25; column 7, lines 21-49); allocated rate of the data transmitted; allocated duration of the data transmitted; message identifier, direction, and type; and channel use starting time (column 9, lines 33-68; table 3).

As to claim 6, Kim teaches a method for processing control information, wherein the control information includes transmission format information, which includes: code and modulation information in the form of type of code used: Walsh code, quasi-orthogonal code, Bi-Phase Shift Keying, or Quadrature Phase Shift Keying (column 13, lines 3-23); transport block set size information in the form of frame length of the data transmitted (column 2, lines 14-25; column 7, lines 21-49); and transport channel identification information in the form of pilot channel information for estimating the channel gain and phase and for performing acquisition and handoff (column 5, lines 49-64), and channel identifier and a channel parameter (column 7, lines 1-10); and channel use starting time (column 9, lines 33-68; table 3).

As to claim 7, Kim teaches transmission format information is separately decoded from the portion of the encoded signaling information (column 6, line 46- column 7, line 19; figures 1-2).

As to claim 8, Kim teaches convolutionally coding signaling information, and adding tail bits to the encoded signaling information (column 12, lines 13-37).

As to claim 9, Kim teaches convolutionally coding signaling information, and selectively adding tail bits to the encoded signaling information (column 12, lines 13-37).

As to claim 10, Kim teaches convolutionally coding signaling information, and puncturing selected bits from the encoded signaling information (column 12, line 65- column 13, line 19).

As to claim 12, Kim teaches a method for processing control information in a wireless communication system via a control channel that includes convolutionally coding signaling information, and selectively puncturing selected bits from the encoded signaling information such that the number of bits

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punctured from certain portions is less than the number of bits punctured from other portions (column 12, line 65- column 13, line 19). Kim teaches decoding the signaling information separately from the other portions of the transmitted signal (column 6, line 46- column 7, line 19; figure 1-2).

As to claim 13, Kim teaches a method for transmitting control information in a wireless communication system via a control channel for transmission format information (column 1, lines 47-52; column 6, lines 21-35; column 10, lines 4-57), and another channel for data (column 4 lines 30-34; column 10, lines 4-57; figure 4). The transmission information includes those taught by Kim in the rejection of claim 6. Kim teaches transmission format information is separately decoded from the portion of the encoded signaling information (column 6, line 46- column 7, line 19; figures 1-2).

As to claim 14, Kim teaches a method for decoding control information in a wireless communication system including a dedicated control channel (column 1, lines 47-52; column 5, lines 9-18) used by a plurality of mobile stations for communicating with a base station (column 5, lines 9-18). The control channel is used to send transmission format information (column 1, line 47- column 2, line 24; column 13, lines 51-64). Kim teaches a method for processing control information in a wireless communication system via a control channel for transmission format information (column 1, lines 47-52; column 6, lines 21-35; column 10, lines 4-57), and another channel for data (column 4 lines 30-34; column 10, lines 4-57; figure 4). The transmission information includes those taught by Kim in the rejection of claim 6. Kim teaches transmission format information is separately decoded from the portion of the encoded signaling information (column 6, line 46- column 7, line 19; figure 1-2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 11 rejected under 35 U.S.C. 103(a) as being obvious over Kim, further in view of TSG-RAN Working group 1, 31 May 1999, Cheju, Korea (hereafter referred to as TSG-RAN). Kim teaches convolutionally coding signaling information, and puncturing selected bits from the encoded signaling information (column 12, line 65- column 13, line 19). Kim does not teach signaling information that is separately decoded is less punctured than the puncturing of the bits from the remaining encoded signaling information. TSG-RAN teaches that selectively puncturing sections of encoded information less than other portions allows that overall the punctured bits are distributed as evenly as possible, to achieve the minimum Bit Error Rate (BER) (see TSG-RAN, pages 2-3). Therefore, it would be obvious to one of ordinary skill in the art at the time of the invention to have signaling information that is separately decoded is less punctured than the puncturing of the bits from the remaining encoded signaling information, in order to achieve the minimum BER in the system taught by Kim.

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Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:


- i. U.S. Patent 5907586, Katsuragawa et al. (columns 1-2);
- ii. U.S. Patent 5309474, Gilhousen et al.;
- iii. U.S. Patent 6678263, Hammons, Jr. et al.;
- iv. U.S. Patent 6567475, Dent et al; and
- v. Automatic Repeat Request (ARQ) and Hybrid ARQ (HA), 2000,
<http://www.cs.berkeley.edu/~adj/cs294-1.s98/projects/FECDelay/tsld008.htm>.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anika F. Talapatra whose telephone number is 571-272-6039. The examiner can normally be reached on Monday to Friday, 08:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. T.


KEVIN BURD
PRIMARY EXAMINER